



Probing the solar core: SoHO results and future instrumentation

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In this work we show the latest results obtained on the solar core by the ESA/NASA SoHO mission. We will show the actual status on the g-mode research made with GOLF/SoHO after more than 3000 days. We will follow up the evolution of the g-mode candidates previously detected using 1290 and 2000 days (Turck-Chieze et al. 2004). We will also show the solar differential rotation profile (couvidat et al. 2003, Garcia et al. 2004) down to 0.2 solar radii. To go deeper inside the solar core more g modes are needed. They are probably not accessible with the present generation of helioseismic instruments. In this context the GOLF-NG (New Generation) project will be described.

Couvidat et al., 2003, ApJl, 597, L77 Garcia et al., 2004, Solar Physics, 220, 269
Turck-Chieze et al., 2004, ApJ, 604, 455